

I. 37 CFR §41.37 (c)(1)(i) - Real Party in interest

The real party in interest is the assignee of the entire interest in the U.S. patent application, namely Nortel Networks Limited.

II. 37 CFR §41.37 (c)(1)(ii) - Related Appeals and Interferences

The Applicant believes that there are no appeals or interferences that are related to, or may directly affect, or be affected by, or have a bearing on the Board's decision in the pending appeal.

III. 37 CFR §41.37 (c)(1)(iii) - Status of Claims

The following is a statement of the current status of the claims that have been filed in the present application:

Claims 1, 3, 4, 6, 9-20 and 22-31 are currently rejected.

Claims 2, 5, 7, 8 and 21 are cancelled.

The text of claims 1, 3, 4, 6, 9-20 and 22-31 can be seen in Section VIII entitled "Claims Appendix" included below.

The rejection of claims 1-3, 4, 6, 9-20 and 22-31 is being appealed.

IV. 37 CFR §41.37 (c)(1)(iv) - Status of Amendments

The last amendments to the claims were made in our communication to the Patent Office dated February 16, 2007. This communication was made in response to the final office action dated September 20, 2006 and the Advisory Action of January 16, 2007.

No amendments have been filed in connection with the non-final office action dated March 16, 2007.

V. 37 CFR §41.37 (c)(1)(v) - Summary of Claimed Subject Matter

The present application includes 26 claims, of which claims 1, 20, 29, 30 and 31 are independent.

Claim 1

Claim 1 is directed to a method of processing a request for a connection through a multi-service gateway (200). The method comprises determining a usage level of a resource pool (204) and determining a priority level of the connection request [page 12, lines 4-19 and 25-29]. If the usage level is below a pool occupancy threshold that is a function of the priority level of the connection request [page 18, lines 16-27], the method comprises allocating resources from the resource pool to satisfy the connection request [page 14, lines 21 to 26 and Figure 3]. If the usage level is not below the occupancy threshold, the method comprises allocating resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold [page 14, lines 26-27, page 15, line 25 to page 16, line 2, and Figure 3].

Claim 20

Claim 20 is directed to a multi-service gateway (200). The multi-service gateway comprises a plurality of packet-switched ports (160A-N), a pool of port processing software entities (PPSEs 204A-N), each PPSE having sufficient capacity to provide processing for any of the packet-switched ports (160A-N) and a resource manager (270) configured to execute a method. The method comprises receiving connection requests [page 12, lines 25-26] and, if a particular connection request involves at least one of the packet-switched ports, allocating a subset of the PPSEs in the pool for satisfying the particular

connection request [page 14, line 5-12], as a function of a priority level of the particular connection request [page 15, line 25 to page 16, line 14], as a function of a usage level of the pool [page 14, lines 15-18] and as a function of a pool occupancy threshold [page 14, lines 21-24]. The allocating comprises determining the usage level of the pool and if the usage level is below the pool occupancy threshold, allocating resources from the resource pool to satisfy the connection request [page 14, lines 21 to 26 and Figure 3] and if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold [page 14, lines 26-27, page 15, line 25 to page 16, line 2, and Figure 3].

Claim 29

Claim 29 is directed towards a multi-service gateway (200), comprising means (270) for receiving a connection request, means (275) for determining a usage level of resources in a resource pool (204a-n) in the multi-service gateway (200) and means (270) for allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold [page 14, lines 21 to 26 and Figure 3] that is a function of the priority level of the connection request [page 18, lines 16-27], otherwise determining a priority level of the connection request [page 12, line 32 to page 13, line 5] and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold [page 14, lines 26-27, page 15, line 25 to page 16, line 2, and Figure 3].

Claim 30

Claim 30 is directed towards a computer-readable media tangibly embodying a program of instructions [page 19, lines 15-19] executable by a resource manager (270) to perform a method of processing a received request for a connection through a multi-service gateway (200). The method comprises the steps of determining a usage level of resources in a resource pool (204) in the multi-

service gateway (200) and allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold [page 14, lines 21 to 26 and Figure 3] that is a function of the priority level of the connection request [page 18, lines 16-27]. Otherwise the method comprises determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold [page 14, lines 26-27, page 15, line 25 to page 16, line 2, and Figure 3].

Claim 31

Claim 31 is directed towards at least one computer [page 19, lines 15-19] programmed to execute a process for processing a received request for a connection through a multi-service gateway (200). The process comprises determining the usage level of a resource pool (204) in the multi-service gateway (200) and if the usage level is below a pool occupancy threshold that is a function of the priority level of the connection request [page 18, lines 16-27], allocating resources from the resource pool to satisfy the connection request [page 14, lines 21 to 26 and Figure 3]. Or, if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold [page 14, lines 26-27, page 15, line 25 to page 16, line 2, and Figure 3].

VI. 37 CFR §41.37 (c)(1)(vi) - Grounds of rejection to be reviewed on Appeal

- A. In the Office Action dated March 16, 2007, the Examiner has rejected claims 1, 3-4, 6, 9-17, 19-20, 22, 26-27 and 29-31 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,980,515 (hereafter to be referred to as Schunk et al). This rejection was also set forth in the final office action of September 20, 2006. The Applicant provided arguments against this rejection in both the communication dated November 24, 2006 and in the communication dated February 16, 2007 (which was filed together with a request for an RCE).
- B. In the Office Action dated March 16, 2007, the Examiner has rejected claims 18, 23-25 and 28 under 35 U.S.C. §103(a) as being unpatentable over Schunk et al. in view of U.S. Patent 6,516,059 (hereafter to be referred to as Shaffer et al). This rejection was also set forth in the final office action of September 20, 2006. The Applicant provided arguments against this rejection in both the communication dated November 24, 2006 and in the communication dated February 16, 2007 (which was filed together with a request for an RCE).

VII. 37 CFR §41.37 (c)(1)(vii) - Argument

A. Response to Rejection of claims 1, 3-4, 6, 9-17, 19-20, 22, 26-27 and 29-31 under 35 U.S.C. §102(e)

As mentioned above in section (c)(1)(vi), the Examiner has rejected claims 1, 3-4, 6, 9-17, 19-20, 22, 26-27 and 29-31 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,980,515 (hereafter to be referred to as Schunk et al).

For the reasons presented below, the Applicant respectfully disagrees with the Examiner's rejection, and submits that claims 1, 3-4, 6, 9-17, 19-20, 22, 26-27 and 29-31, as they currently stand, are in allowable form.

Claims 1, 3-4, 6, 9-17 and 19

For ease of reference, independent claim 20 has been reproduced herein below.

Claim 1

A method of processing a request for a connection through a multi-service gateway, comprising:

determining a usage level of a resource pool; and

determining a priority level of the connection request,

if the usage level is below a pool occupancy threshold that is a function of the priority level of the connection request, allocating resources from the resource pool to satisfy the connection request;

if the usage level is not below the occupancy threshold, allocating resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

The Applicant respectfully submits that the reference cited by the Examiner does not disclose, teach or suggest the above-emphasized limitation of independent claim 1. More specifically, Schunk et al. does not disclose a method of processing a request for a connection through a multi-service gateway that comprises determining a priority level of the connection request and if a usage level of a resource pool is not below an occupancy threshold "allocating

resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold".

[emphasis added]

As has been set forth by the Applicant in previous communications, Schunk et al. teaches a multi-tiered multi-service network switch that can prioritize incoming connection requests when there is competition for resources. In Schunk et al., different users are classified according to different Quality of Access (QoA) levels that determine at any given time whether they will be granted access to the switch based on current switch usage (column 8, lines 61-66), (column 15, line 64 - column 16, line 10). QoA levels can be associated with switch usage levels (figure 13).

In the embodiment described by Schunk et al., a connection request will only be granted the required resources if the current switch usage level is less than the level corresponding to the connection requests' QoA. Schunk et al. makes no allowance for providing resources required by a connection request if the usage level of a resource pool is not below a usage threshold. Instead, in Schunk et al., in the case where the usage level of the resource pool is not below a certain threshold, the connection is always rejected (column 8, line 66 - column 9, line 2; column 18, lines 8-12), which is not the case in the claimed invention.

Instead, the claimed invention allows "allocating resources from the resource pool to satisfy the connection request" *even when* "the usage level is not below the occupancy threshold". The allocation of resources under such circumstances is still possible based on whether the priority level of the connection request exceeds a priority threshold. The existence and *raison d'etre* of the priority threshold is clearly absent from Schunk, which prescribes a categorical refusal of a connection request when the usage level is not below the occupancy threshold (see col 15, line 67 to col 16 line 2).

The Applicant respectfully submits the following example in order to further illustrate the differences between Shunk et al. and the claimed invention. Referring to Figure 13 of Schunk, if the resource utilization is at 80% and a QoA level 2 connection request is received, the request would be refused since the resource utilization is not below the access threshold (which, in Figure 13 of Schunk, corresponds to 75% for a QoA level 2 request). Consider now the claimed invention, and assume that the "priority threshold" is set to 4. If a priority level 2 connection request is received when the resource usage level is at 80% (*i.e.*, not below the occupancy threshold, which is continuously assumed to be 75%), the connection request would still be granted since the priority level of the connection request (priority level 2) is higher than the priority threshold (set at priority level 4).

It should be appreciated that the above example is not intended to be a limitation of the invention, but merely serves to illustrate (a) the absence of a claimed feature (namely, the priority threshold) in Schunk et al. and (b) an inability of Schunk et al.'s apparatus to perform the claimed method.

The Examiner's attention is returned to the following limitations of independent claim 1:

if the usage level is not below the occupancy threshold, allocating resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

The above fragment of claim language is directed to the scenario where the usage level of the resource pool is not below (*i.e.* is above) the occupancy threshold. Now, when the priority level of the connection request is lower than a *priority threshold* (and continuing to consider the scenario where the usage level of the resource pool is not below the occupancy threshold), resources would not be allocated to satisfy the connection request, according to the present invention. However, where the priority level of the connection request is higher than the

priority threshold (and again continuing to consider the scenario where the usage level of the resource pool is not below the occupancy threshold), the present invention claims that resources *are nevertheless* allocated to satisfy the connection request.

Stated differently, in the case where the usage level is above an occupancy threshold, but the priority level of the connection request is above a *priority threshold*, the claimed invention contemplates that resources *are* allocated to satisfy the connection request **despite the usage level not being below the occupancy threshold.**

This needs to be carefully contrasted with the teachings of the cited art. More specifically, let us consider the passages of Schunk et al. cited by the Examiner in the Advisory Action (i.e., Fig. 15 and the accompanying description in col. 17, lines 4-57). Here, the maximum number of modems is 32, while the number of modems currently available is 29. As stated by Schunk et al. in col. 17, lines 21-24: "The difference between this number [i.e., 29] and the number from the maximum global resources field 340 [i.e., 32] indicates the number of modems in use by the VR on the entire switch [i.e., 3]." If one adopts the terminology of the claimed invention, this means that the "usage level" is 3 (since only 3 out of 32 modems are in use).

Next, let us consider the closest equivalent in Schunk *et al.* of an "occupancy threshold that is a function of the priority level of the connection request". To this end, Schunk *et al.* teaches a "local QoA" field 348 that indicates a different number of modems that need to be available in order for a request having a certain QoA class (or "priority level", for the sake of argument) to be granted access to the switch. Specifically, the number of modems that need to be available can take values of 0, 8, 16 and 24, corresponding to QoA classes of 1, 2, 3 and 4, respectively. Thus, as stated by Schunk *et al.*, "level one QoA accesses the switch when there are zero or more modems available (100% of

the time), level two QoA accesses the shelf when there are 8 or modems available (75% of the time)" and so on.

Therefore, in Schunk *et al.*, when a resource request is received, consideration is given to the QoA (*i.e.*, the "priority level") of the resource request. Then, one determines, for that QoA, the number of modems that need to be available in order for the request to be granted (*i.e.*, the "occupancy threshold that is a function of the priority level"). Then, if the actual number of available modems is above this number (*i.e.*, if the "usage level" is below the "occupancy threshold"), the resource request is granted. Otherwise (*i.e.*, if the usage level is not below the occupancy threshold), the connection request is denied (see Schunk *et al.*, col. 18, lines 50-52: "if there are no resources available that match the specified QoA [...], the connection manager [...] causes the call to be terminated").

Thus, in Schunk *et al.*, when the usage level is not below the occupancy threshold (that is dependent on the priority level of a given request), the request will be denied regardless of its actual priority level. Conversely, there are no cases in Schunk *et al.* where the request will be granted despite the usage level not being below the occupancy threshold. This is in direct contrast to the above emphasized limitation of independent claim 1.

In summary, it is worth repeating the Applicant's argument made previously in the responses dated June 16, 2006, November 24, 2006 and February 16, 2007 to the effect that Schunk *et al.* makes no allowance for allocating resources required by a connection request *if the usage level of a resource pool happens not to be below the "usage threshold"*. In such a situation the connection is always rejected (see previously cited passages of Schunk *et al.* and also column 8, line 66 to column 9, line 2; column 18, lines 8-12), which is not the case in the claimed invention.

It should be noted that the significance of the *priority threshold* in the claimed invention advantageously allows certain higher-priority connection requests to be allocated resources even when these resources would not usually have been considered sufficiently available to allow requests of that priority level to be allocated. Effectively, this can turn otherwise unavailable resources into "hidden" resources (see Applicant's description on page 15, line 25 to page 16, line 13)

In light of all the arguments set forth above, it should be appreciated that Schunk et al. does not disclose, teach or suggest the above-emphasized limitation of independent claim 1. As such, the anticipation rejection cannot stand. It is therefore respectfully requested that the rejection to independent claim 1 be withdrawn.

Claims 3-4, 6, 9-17 and 19 depend from independent claim 1 and as such incorporate by reference all the limitations contained therein, including the above emphasized limitation, which has already been shown to be absent from Schunk et al. Accordingly, there is at least one limitation in dependent claims 3-4, 6, 9-17 and 19 that is not taught by Schunk et al. and as such, the anticipation rejection cannot stand. It is respectfully requested that the rejection to dependent claims 3-4, 6, 9-17 and 19 be withdrawn.

In addition, with regards to claim 19, the Applicant respectfully submits that Schunk et al. does not disclose the following limitation either:

selecting the pool occupancy threshold to achieve a probability of blocking that is less than a pre-determined value.

The Examiner refers to col. 15, line 64 to col. 16, line 10 of Schunk *et al.* which the Examiner says "recite associating an access threshold with each QoA level and if resource utilization exceeds the threshold corresponding to the QoA level the request is refused whereby system resources become limiting once threshold reaches 25 percent." However, it should be noted that the numerical values used

in this passage refer to percentages of utilization of a set of modems, **not** to a probability of blocking. As such, the Applicant respectfully submits that Schunk et al. does not disclose the above-emphasized limitation of dependent claim 19. It is therefore respectfully requested that the rejection of claim 19 under 35 USC 102(e) be withdrawn.

Claims 20, 22 and 26-27

For ease of reference, independent claim 20 has been reproduced herein below.

A multi-service gateway, comprising:

a plurality of packet-switched ports;

a pool of port processing software entities (PPSEs), each PPSE having sufficient capacity to provide processing for any of the packet-switched ports; and

a resource manager configured to execute a method comprising receiving connection requests and, if a particular connection request involves at least one of the packet-switched ports, allocating a subset of the PPSEs in the pool for satisfying the particular connection request, as a function of a priority level of the particular connection request, as a function of a usage level of the pool and as a function of a pool occupancy threshold, wherein said allocating comprises:

determining the usage level of the pool; and

if the usage level is below the pool occupancy threshold, allocating resources from the resource pool to satisfy the connection request;

if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

The Applicant respectfully submits that Schunk et al. does not disclose, teach or suggest the above-emphasized limitation of independent claim 20. The language of claim 20 is similar to that of independent claim 1, and as such, for the same reasons as those presented above with respect to independent claim 1, the Applicant respectfully submits that the anticipation rejection against independent claim 20 does not stand. Accordingly, it is respectfully requested that the rejection to independent claim 20 is withdrawn.

In addition, the Applicant respectfully submits that Schunk *et al.* neither teaches nor suggests "a multi-service gateway [with] a pool of port processing software entities (PPSEs), ***each*** PPSE having sufficient capacity to provide processing for ***any*** of the packet-switched ports" (***bold italics*** added). Rather, Schunk

discloses a multi-service network switch system architecture where "each slot on the switch preferably accommodates a single interface module (a card), referred to as a forwarding module (FM) 10. Each FM 10 preferably includes the on-board intelligence, route forwarding, and route processing information for distributed packet forwarding" (column 3, lines 39-48). As such, the use of a pool of port processing resources, shared by all ports of the multi-service gateway, is absent from Schunk *et al.*

Claims 22 and 26-27 depend from independent claim 20 and as such incorporate by reference all the limitations contained therein, including the above emphasized limitations, which have already been shown to be absent from Schunk *et al.* Accordingly, there are at least some limitations in dependent claims 22 and 26-27 that are not taught by Schunk *et al.* and as such, the anticipation rejection cannot stand. It is respectfully requested that the rejection to dependent claims 22 and 26-27 be withdrawn.

Claim 29

For ease of reference, independent claim 29 has been reproduced herein below.

A multi-service gateway, comprising:
means for receiving a connection request;
means for determining a usage level of resources in a resource pool in the multi-service gateway; and
*means for allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold that is a function of the priority level of the connection request, **otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.***

The Applicant respectfully submits that Schunk *et al.* does not disclose, teach or suggest the above-emphasized limitation of independent claim 29. The language of claim 29 is similar to that of independent claim 1, and as such, for the same reasons as those presented above with respect to independent claim 1, the Applicant respectfully submits that the anticipation rejection against independent

claim 29 does not stand. Accordingly, it is respectfully requested that the rejection to independent claim 29 be withdrawn.

Claim 30

For ease of reference, independent claim 30 has been reproduced herein below.

Computer-readable media tangibly embodying a program of instructions executable by a resource manager to perform a method of processing a received request for a connection through a multi-service gateway, the method comprising:
determining a usage level of resources in a resource pool in the multi-service gateway; and
*allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold that is a function of the priority level of the connection request, **otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.***

The Applicant respectfully submits that Schunk et al. does not disclose, teach or suggest the above-emphasized limitation of independent claim 30. The language of claim 30 is similar to that of independent claim 1, and as such, for the same reasons as those presented above with respect to independent claim 1, the Applicant respectfully submits that the anticipation rejection against independent claim 30 does not stand. Accordingly, it is respectfully requested that the rejection to independent claim 30 be withdrawn.

Claim 31

For ease of reference, independent claim 31 has been reproduced herein below.

At least one computer programmed to execute a process for processing a received request for a connection through a multi-service gateway, the process comprising:
determining the usage level of a resource pool in the multi-service gateway; and
if the usage level is below a pool occupancy threshold that is a function of the priority level of the connection request, allocating resources from the resource pool to satisfy the connection request;
if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

The Applicant respectfully submits that Schunk et al. does not disclose, teach or suggest the above-emphasized limitation of independent claim 31. The language of claim 31 is similar to that of independent claim 1, and as such, for the same reasons as those presented above with respect to independent claim 1, the Applicant respectfully submits that the anticipation rejection against independent claim 31 does not stand. Accordingly, it is respectfully requested that the rejection to independent claim 31 be withdrawn.

B. Response to Rejection of claims 18, 23-25 and 28 under 35 U.S.C. §103(a)

In the Office Action dated March 16, 2007, the Examiner has rejected claims 18, 23-25 and 28 under 35 U.S.C. §103(a) as being unpatentable over Schunk et al. in view of U.S. Patent 6,516,059 (hereafter to be referred to as Shaffer et al).

Claim 18

Claim 18 is dependent on independent claim 1, and as such incorporates by reference all the limitations contained therein, including the following limitation which has already been found to be absent from Schunk *et al.* (see earlier in this response).

if the usage level is not below the occupancy threshold, allocating resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

The Applicant further submits that this limitation is also absent from Shaffer.

Shaffer merely discloses a method and system that adaptively assigns call processing to either a centrally accessed unit or a particular telephony device in a network of telephony devices based on the current availability of resources. The centrally accessed unit is assigned to perform each call-related task until a predetermined threshold of processing power is being accessed. Once the predetermined threshold is reached, subsequent requests are assigned to the

telephony devices (column 2, lines 59-65). Shaffer neither mentions nor suggests the allocation of resources based on “a priority level of the incoming request” and “a pool occupancy threshold that is a function of the priority level of the connection request”, let alone the allocation of resources when the usage level is not below the occupancy threshold “only if the priority level of the connection request is higher than a *priority threshold*”.

To establish a *prima facie* case of obviousness as per §2142 of the MPEP (8th ed.), three criteria must be considered: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) **the prior art references must teach or suggest all of the claim limitations**. Since the combination of Schunk et al. and Shaffer fails to disclose all of the features of independent claim 1, which are included by reference in dependent claim 18, the Applicant respectfully submits that the combination of these references fails to establish a *prima facie* case of obviousness as per §706.02(j) and §2142 of the MPEP. As such, it is respectfully requested that the rejection to dependent claim 18 be withdrawn.

Claims 23-25 and 28

Claims 23-25 and 28 depend from independent claim 20, and as such incorporate by reference all the limitations contained therein, including the following limitation which has already been shown above to be absent from Schunk et al.

if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

For the same reasons as those presented above with respect to claim 18, it is respectfully submitted that these limitations are also absent from Shaffer et al.

Accordingly, it is respectfully requested that the rejection of dependent claims 23-25 and 28 be withdrawn.

VIII. 37 CFR §41.37 (c)(1)(viii) - Claim Appendix

The following is a listing of the claims involved in the present appeal.

1. *(Previously presented)* A method of processing a request for a connection through a multi-service gateway, comprising:
 - determining a usage level of a resource pool; and
 - determining a priority level of the connection request,
 - if the usage level is below a pool occupancy threshold that is a function of the priority level of the connection request, allocating resources from the resource pool to satisfy the connection request;
 - if the usage level is not below the occupancy threshold, allocating resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.
2. *(Cancelled)*
3. *(Previously presented)* The method as claimed in claim 1, further comprising receiving the connection request prior to allocating resources from the resource pool.
4. *(Previously presented)* The method as claimed in claim 1, further comprising receiving the connection request from a connection server/broker prior to allocating resources from the resource pool.
5. *(Cancelled)*

6. *(Previously presented)* The method as claimed in claim 1, wherein the priority level of the connection request is a function of the type of traffic carried by the requested connection.
7. *(Cancelled)*
8. *(Cancelled)*
9. *(Previously presented)* The method as claimed in claim 6, wherein each connection request is associated to a type of traffic selected from the group consisting of originating, terminating, feature and progress.
10. *(Previously presented)* The method as claimed in claim 9, wherein the priority level of progress traffic is greater than the priority level of feature traffic, which is greater than the priority level of terminating traffic, which is greater than the priority level of originating traffic.
11. *(Previously presented)* The method as claimed in claim 1, wherein the processing resources are software resources for processing packets.
12. *(Previously presented)* The method as claimed in claim 1, wherein the processing resources are port processing resources.
13. *(Previously presented)* The method as claimed in claim 1, wherein the processing resources are configured to perform conversion of a signal from a circuit-switched format to a packet-switched format.
14. *(Previously presented)* The method as claimed in claim 13, wherein the circuit-switched format is a time-division-multiplexed (TDM) format.

15. *(Previously presented)* The method as claimed in claim 13, wherein the packet-switched format is an asynchronous transfer mode (ATM) format or an Internet Protocol (IP) format.
16. *(Previously presented)* The method as claimed in claim 1, further comprising:
 - if no processing resources are allocated to satisfy the connection request, blocking the connection request.
17. *(Previously presented)* The method as claimed in claim 15, further comprising reporting blockage of the connection request to a connection server/broker.
18. *(Previously presented)* The method as claimed in claim 1, further comprising:
 - determining whether circuit-switched connection resources are required to satisfy the connection request; and
 - if circuit-switched connection resources are required to satisfy the connection request, setting a cross-connect mapping for controlling the circuit-switched connection resources.
19. *(Previously presented)* The method as claimed in claim 1, further comprising selecting the pool occupancy threshold to achieve a probability of blocking that is less than a pre-determined value.
20. *(Previously presented)* A multi-service gateway, comprising:
 - a plurality of packet-switched ports;
 - a pool of port processing software entities (PPSEs), each PPSE having sufficient capacity to provide processing for any of the packet-switched ports; and

a resource manager configured to execute a method comprising receiving connection requests and, if a particular connection request involves at least one of the packet-switched ports, allocating a subset of the PPSEs in the pool for satisfying the particular connection request, as a function of a priority level of the particular connection request, as a function of a usage level of the pool and as a function of a pool occupancy threshold, wherein said allocating comprises: determining the usage level of the pool; and if the usage level is below the pool occupancy threshold, allocating resources from the resource pool to satisfy the connection request; if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

21. *(Cancelled)*
22. *(Previously presented)* The multi-service gateway as claimed in claim 20, wherein the resource manager is configured to determine the priority level of the connection request.
23. *(Previously presented)* The multi-service gateway as claimed in claim 20, wherein each PPSE has the capability to perform conversion of a signal from a circuit-switched format to a packet-switched format.
24. *(Previously presented)* The multi-service gateway as claimed in claim 23, wherein the circuit-switched format is a time-division-multiplexed (TDM) format.

25. *(Previously presented)* The multi-service gateway as claimed in claim 23, wherein the packet-switched format is an asynchronous transfer mode (ATM) format or an Internet Protocol (IP) format.
26. *(Previously presented)* The multi-service gateway as claimed in claim 20, wherein the resource manager is further adapted to block the connection request if no resources are allocated to satisfy the connection request.
27. *(Previously presented)* The multi-service gateway as claimed in claim 26, wherein the resource manager is further adapted to report blockage of the connection request to a connection server/broker.
28. *(Previously presented)* The multi-service gateway as claimed in claim 20, further comprising a plurality of circuit-switched ports and a set of circuit-switched connection resources, wherein the resource manager is further adapted to determine whether circuit-switched connection resources are required to satisfy the connection request and, if circuit-switched connection resources are required to satisfy the connection request, setting a cross-connect mapping for controlling the circuit-switched connection resources.
29. *(Previously presented)* A multi-service gateway, comprising:
 - means for receiving a connection request;
 - means for determining a usage level of resources in a resource pool in the multi-service gateway; and
 - means for allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold that is a function of the priority level of the connection request, otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy

the connection request only if the priority level of the connection request is higher than a priority threshold.

30. (*Previously presented*) Computer-readable media tangibly embodying a program of instructions executable by a resource manager to perform a method of processing a received request for a connection through a multi-service gateway, the method comprising:

determining a usage level of resources in a resource pool in the multi-service gateway; and

allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold that is a function of the priority level of the connection request, otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

31. (*Previously presented*) At least one computer programmed to execute a process for processing a received request for a connection through a multi-service gateway, the process comprising:

determining the usage level of a resource pool in the multi-service gateway; and

if the usage level is below a pool occupancy threshold that is a function of the priority level of the connection request, allocating resources from the resource pool to satisfy the connection request;

if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.

IX. 37 CFR §41.37 (c)(1)(ix) - Evidence Appendix

There is no evidence submitted herewith.

X. 37 CFR §41.37 (c)(1)(x) - Related Proceedings Appendix

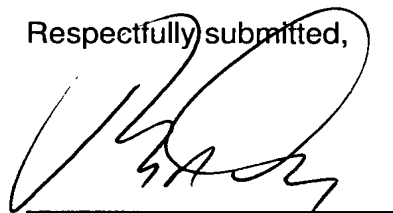
There are no related proceedings at per paragraph c(1)(ii) indicated above.

CONCLUSION

It is respectfully submitted that claims 1, 3, 4, 6, 9-20 and 22-31 are in condition for allowance as they currently stand. Reconsideration of the rejections and objections is requested. Allowance of claims 1, 3, 4, 6, 9-20 and 22-31 at an early date is solicited.

Date: *August 31, 2007*

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. A. Dowell', written over a horizontal line.

Ralph A. Dowell
Reg. No. 26,868
Agent for the Applicants

DOWELL & DOWELL, P.C.
2111 Eisenhower Ave.
Suite 406
Alexandria, VA 22314
U.S.A.
Telephone: (703) 415-2555
Facsimile: (703) 415-2559